

Amendments to the Claims:

Please cancel claims 1-24 presented in the underlying International Application No. PCT/DE03/00540, and add new claims 25-60 as shown in the listing of claims.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-24 (canceled)

Claim 25 (new): A method for time synchronization of a plurality of measuring computers cooperating over a telecommunications network, the method comprising:

providing a plurality of first time sources associated with a first measuring computer, each of the first time sources having a different respective accuracy and configured to provide a first time stamp; and

selecting, using the first measuring computer, a third time source of the plurality of first time sources as a function of an accuracy of the third time source.

Claim 26 (new): The method as recited in claim 25 wherein the telecommunications network includes at least one of an internet and an intranet.

Claim 27 (new): The method as recited in claim 25 further comprising performing a measurement method using the first time stamp.

Claim 28 (new): The method as recited in claim 25 wherein the third time source is more accurate than at least one other of the plurality of first time sources.

Claim 29 (new): The method as recited in claim 25 wherein the third time source has a next

best accuracy relative to a fourth time source of the plurality of first time sources, and further comprising attempting, using the first measuring computer, to initially select the fourth time source before the selecting the third time source, the selecting the third time source including automatically selecting the third time source when the fourth time source has failed.

Claim 30 (new): The method as recited in claim 25 wherein the third time source includes signals of a satellite system, the third time source being more accurate than any other of the plurality of first time sources.

Claim 31 (new): The method as recited in claim 30 wherein the satellite system includes a global positioning system.

Claim 32 (new): The method as recited in claim 30 wherein the first measuring computer includes a local global positioning system receiver integrated therein and configured to receive the signals of the satellite system.

Claim 33 (new): The method as recited in claim 25 wherein each of the measuring computers includes a respective local clock continuously synchronized to a respective local GPS receiver via a network time protocol so as to provide a respective internally synchronized local clock.

Claim 34 (new): The method as recited in claim 33 wherein a fourth of the plurality of first time sources includes signals of a satellite system, and the third time source includes the internally synchronized local clock of the first measuring computer, the third time source having a next highest accuracy relative to the fourth time source.

Claim 35 (new): The method as recited in claim 25 wherein the first measuring computer includes a first local global positioning system receiver and first local clock, and further

comprising, when no signal of a global positioning system is present at the first local global positioning system receiver, synchronizing the first local clock via a network time protocol to a second local clock of at least one predetermined second measuring computer of the plurality of measuring computers after a predetermined time interval so as to provide an external synchronization.

Claim 36 (new): The method as recited in claim 35 wherein the time interval is adjustable.

Claim 37 (new): The method as recited in claim 35 wherein the second local clock has a second highest accuracy relative to an accuracy of other time sources of the plurality of first time sources.

Claim 38 (new): The method as recited in claim 25 wherein the first measuring computer includes a first local clock and further comprising synchronizing the first local clock via a network time protocol to a second local clock of at least one predetermined second measuring computer of the plurality of measuring computers after a predetermined time interval so as to externally synchronize the first local clock, the first time source including the externally synchronized first local clock, the externally synchronized first local clock having a third highest accuracy relative to other time sources of the plurality of first time sources.

Claim 39 (new): The method as recited in claim 25 further comprising synchronizing a first local clock of the first measuring computer via a network time protocol and storing a type and an accuracy of the synchronizing.

Claim 40 (new): The method as recited in claim 25 wherein the first measuring computer includes a first local clock, the first time source including the first local clock, the first local clock being unsynchronized, the unsynchronized first local clock having a fourth highest accuracy relative to other time sources of the plurality of first time sources.

Claim 41 (new): The method as recited in claim 25 further comprising transmitting measurement packets between the first measuring computer and a second measuring computer of the plurality of measuring computers.

Claim 42 (new): The method as recited in claim 41 wherein the measurement packets include user datagram protocol packets.

Claim 43 (new): The method as recited in claim 41 wherein the first measuring computer acts as a sender and the second measuring computer acts as a receiver.

Claim 44 (new): The method as recited in claim 41 further comprising, using the first measuring computer:

- recording the first time stamp, the first time stamp being a send time stamp of an outgoing measurement packet;
- generating first data associated with the send time stamp; and
- transmitting the data to the second measuring computer with the outgoing measurement packet.

Claim 45 (new): The method as recited in claim 41 further comprising transmitting a sequence number to the second measuring computer with the outgoing measurement packet.

Claim 46 (new): The method as recited in claim 44 wherein the first data relates to information about at least one of the third time source, a type of synchronization, an accuracy of the synchronization, and an accuracy of the send time stamp.

Claim 47 (new): The method as recited in claim 44 further comprising generating, with the second measuring computer, a receive time stamp of an incoming measurement packet and

second data associated with the receive time stamp.

Claim 48 (new): The method as recited in claim 47 wherein the data associated with the receive time stamp relates to information about at least one of the third time source, a type of synchronization, an accuracy of the synchronization, and an accuracy of the receive time stamp.

Claim 49 (new): The method as recited in claim 41 further comprising:
generating first data associated with the first time stamp, the first time stamp being a send time stamp;
generating second data associated with a receive time stamp; and
assigning the first data and the second data are to a predetermined evaluation.

Claim 50 (new): The method as recited in claim 49 further comprising stopping a considering of the first and second data when a respective quality of the first and second data falls below a predetermined level.

Claim 51 (new): The method as recited in claim 41 further comprising:
generating first data associated with the first time stamp, the first time stamp being a send time stamp;
generating second data associated with a receive time stamp; and
determining a measurement result from the first and second data.

Claim 52 (new): The method as recited in claim 25 further comprising providing a plurality of second time sources associated with a second measuring computer of the plurality of measuring computers, each of the second time sources having a different respective accuracy and configured to provide a second time stamp;

Claim 53 (new): A time synchronization device comprising:

a first measuring computer;
a second measuring computer cooperating with the first measuring computer over a telecommunications network; and
a plurality of first time sources associated with a first measuring computer, each of the first time sources having a different respective accuracy and configured to provide a first time stamp;
wherein the first computer is configured to select a third time source of the plurality of first time sources as a function of an accuracy of the third time source.

Claim 54 (new): The time synchronization device as recited in claim 53 further comprising a plurality of second time sources associated with the second measuring computer, each of the second time sources having a different respective accuracy and configured to provide a second time stamp.

Claim 55 (new): The time synchronization device as recited in claim 53 wherein the telecommunications network includes at least one of an internet and an intranet.

Claim 56 (new): The time synchronization device as recited in claim 53 wherein the first time stamp is usable for performing a measurement method.

Claim 57 (new): The time synchronization device as recited in claim 53 wherein the third time source is more accurate than at least one other of the plurality of first time sources.

Claim 58 (new): The time synchronization device as recited in claim 53 wherein:
the third time source has a next best accuracy relative to a fourth time source of the plurality of first time sources; and
the first measuring computer is configured to initially attempt to select the fourth time source before selecting the third time source, and then to automatically select the third time

source when the fourth time source has failed.

Claim 59 (new): The time synchronization device as recited in claim 54 wherein the third time source includes signals of a satellite system, the third time source being more accurate than any other of the plurality of first time sources.

Claim 60 (new): The time synchronization device as recited in claim 60 wherein the satellite system includes a global positioning system.